

Remarks

Examiner rejected claims 1, 99, and 102 because, according to the Examiner, it is unclear what structural limitations are conveyed by "X-ray signature characteristic". The claims have been amended to clarify that the data is, at least in part, *representative of an X-ray signature characteristic*, which is defined in the specification. See Application 10/662,778, page 10, lines 4-11.

Examiner has also rejected claims 52 and 97 as being vague and indefinite because "it is unclear what is meant by 'quadrant' with respect to the rest of the system. Applicant has amended those claims to clarify the structural configuration of the detector system.

Finally, Examiner rejected claim 2 because, according to the Examiner, it is a statement of intended use and does not further limit the parent claim. Applicant has cancelled claim 2 and amended claim 3 accordingly.

Examiner rejected claims 1-10, 20-27, 33-37, 42-48, 53-64, 74-79, 93-86, and 99-105 under 35 U.S.C. Section 103(a) as being unpatentable over U.S. Patent Nos. 5,367,552 and U.S. Patent No. 5,524,133. The combination of the '552 and '133 patents also provided the fundamental basis of Examiner's rejection of claims 11-14, 18, 65-68, and 72 (further in view of U.S. Patent No. 6,628,745), claims 15-17, 19, 69-71, and 73 (further in view of U.S. Patent No. 5,265,144), claims 28-32, 80-82, and 106-108 (further in view of U.S. Patent No. 4,789,930, claims 49-51, 94-96 and 98 (further in view of U.S. Patent No. 5,263,075), and claims 38-41, 87-93, and 109-114 (further in view of U.S. Patent No. 6,118,850). Applicant respectfully submits that Examiner's obviousness rejections premised upon the combination of the '552 and '133 patents are improper.

Applicant's invention obtains the scanning benefits of a CT system without requiring the substantial time investment associated with using a CT system. CT scanners have the benefit of being able to generate three-dimensional images along entire slices of regions.

However, the time required to do so is substantial and, for many applications, renders the use of a CT scanner unfeasible. The present invention is a marked improvement because, like CT systems, it can obtain critical scanning information but, unlike CT systems, does not require an extensive amount of scanning time.

The '552 patent is directed toward the screening of passenger luggage and uses a two stage system to first identify a region of luggage that should be subjected an X-ray Computed Tomography scan and then, once identified, to conduct the CT scan on that identified region. The first stage is a single line scanner that identifies a region, defined by the axis along which the line scanner projects, for further scanning. Because a CT scanning system can generate three-dimensional images along an axis, it only requires the first stage system to identify a specific axis along which it should scan. The system does not use, and, in fact, teaches away from the use of, at least two X-ray projection systems to generate at least two images from which a target region is identified. Stated differently, one of ordinary skill in the art would have had no motivation to use at least two X-ray projection systems in conjunction with a CT scanning system because the CT scanning system would not need, and would have no use for, two axes to define a scanning area. Any additional X-ray projection system would therefore be an unnecessary expense.

The '552 patent envisions the first stage to be a simple line scan that produces data which is used to identify an axis—nothing more. In fact, unlike the present application, the '552 patent expressly teaches that data produced from the first stage line scan is not used by operators:

As will be more fully described herein, the data from the line scanner 32, referred to herein as projection data, is not used to display an image on a monitor for operator viewing, rather it is used to identify CT scan locations. '552 Patent, Col.4:58-64.

On the other hand, the '133 patent is directed toward the use of two linear accelerators, one producing X-rays at a higher energy

level and the second producing X-rays at a lower energy level, in order to obtain transmission co-efficient values of scanned items and, using those values, identify the material composition of the scanned items. The '133 patent is wholly incompatible with the '552 patent for a number of reasons. First, it teaches the use of different energy accelerators which, if used as a first stage scan step, would yield data from which it would be difficult to identify a common target region for subsequent analysis. Second, it teaches that an effective materials analysis can be conducted in a single step—a teaching in direct opposition to the '552 patent. Third, it teaches placing the linear accelerators in configurations that, if used, could not yield data from which a common target region could be identified. For example, the '133 patent teaches locating the linear accelerators side by side (see Figure 5). In such a configuration, they would obtain data that could not be cross-compared to identify a particular target region for additional scanning.

In sum, there simply is no motivation to combine '133 patent and '552 patent. Not only would there be no need to use a two projection system with a CT scanner, the two linear accelerator system taught by the '133 patent would be incompatible with a two stage scanning system. Moreover, one of ordinary skill in the art would have found the two references to teach away from each other. The '133 patent teaches the use of a single stage to conduct a materials analysis while, conversely, the '552 patent teaches the use of at least two stages. The two approaches are simply incompatible.

In light of the above, combining the '552 patent and '133 patent to render the claims of the present application obvious is improper. Applicant respectfully requests the Examiner to reconsider the claim rejections.


Applicant further respectfully requests the consideration of references cited in the Information Disclosure Statement submitted herewith. The references were substantially disclosed in the application body but were not incorporated into a filed Information

Disclosure Statement.

Finally, applicant requests a two-month extension of time pursuant to 37 C.F.R. 1.136(a). Accordingly, applicant is providing herewith an extension fee of \$450.00.

Respectfully submitted,

By



Hazim Ansari
40,896